

# Quality Improvement

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- ▣ **How to reliably give the care you meant to and...**
- ▣ **Make things easier, less wasteful, more efficient, more effective and better**

# What's Happening in Health Care?

- ▣ **Transition to Electronic Health Record**
- ▣ **Greater access**
- ▣ **Standardization across multiple levels: delivery, reliability, outcomes**
- ▣ **Slow down in technology and pharmaceutical innovation**
- ▣ **Expectation to get it right every time.**

# Quality Improvement DEFINITION

**“We propose defining it as the combined and unceasing efforts of everyone — healthcare professionals, patients and their families, researchers, payers, planners and educators — to make the changes that will lead to better patient outcomes (health), better system performance (care) and better professional development (learning).”**

**Batalden and Davidoff, *Qual Saf Health Care* 2007;16:2-3**

# Pick your Improvement Project

- ▣ Ideally, find something that there is a lot of momentum behind
- ▣ A bad outcome, a risk management case, or even a close call
- ▣ Or just a “pet peeve”, something that drives you crazy

# Case 1

- ▣ A 27 yo adm to Janus General\* with SOB and fever. Progressive hypoxia and intubated that evening, unable to oxygenate on 100% FiO<sub>2</sub>. PCR+ for H1N1. Received ARDSnet ventilator settings, then APRV and ultimately place on HFOV requiring paralysis with NMB.
- ▣ Patient improved and extubated after 21 days on the ventilator.

\*Fictitious hospital courtesy of Scott Weingart, M.D. @emcrit

## Case 1 (continued)

- ▣ Day 16, nursing, checking pupils noted the cornea appeared dull. Ophthalmology called and noted bilateral corneal abrasions consistent with lack of lubrication.
- ▣ Day 22, patient conversant, has only light and 2 finger vision both eyes.
- ▣ Day 36 patient D/C'd to rehab hospital, awaiting cornea transplant.

## Case 1: Quality Issue

- ▣ Is there an evidence or guideline based recommendation out there?
- ▣ YES, lubricate eyes q 4 hours?



# Root Cause Analysis

- ▣ Risk management conferences and Root Cause Analysis (RCA)
- ▣ “A good nurse would know to lubricate the eyes”
- ▣ “The doctor should have ordered the eye care”

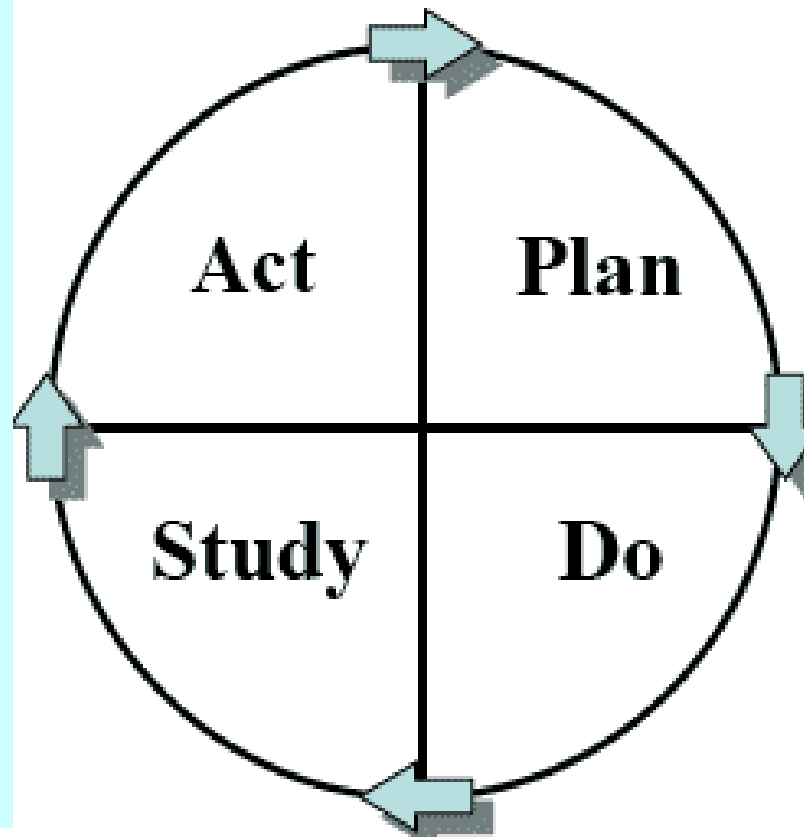
# The Improvement

- ▣ Is it a SYSTEMS PROBLEM?
- ▣ Hint: Answer is usually yes.

# PDSA Cycle

- what changes for next cycle?
- can the change be implemented?

- complete the analysis of the data
- compare data to predictions
- summarise what was learned



- set objective
  - ask question /make predictions
  - plan to answer the questions (who where when)
  - collect data to answer questions
- 
- carry out the plan
  - collect the data
  - begin analysis of the data

# Quality Improvement PLAN

- ▣ Decide where you need to be, get others on board
- ▣ Create a path of where you are going
- ▣ Consider a gap analysis (example waiver antibx)

# DO!

- ▣ Create an order set that includes eye care
- ▣ Blow it up, put it on the wall for comments
- ▣ In-service
- ▣ Check availability of supplies
- ▣ Go-live

# Improvement Plan STUDY

- ▣ Collect Data
- ▣ Process vs. Outcome
- ▣ Create Tool- Check compliance with eye care
- ▣ Elicit feedback
- ▣ Post Data

- ▣ Re-evaluate, tweak and go-again?  
ADAPT
- ▣ Ready to Launch, bigger scale ? ADOPT
- ▣ Is it worthwhile? ABANDON
- ▣ Are the orders being used reliably?
- ▣ Is the eye care given 100% of the time?
- ▣ Is there caregiver feedback we should incorporate?

## Case 2

- ▣ A 78 yo woman was transferred into Janus General ICU with MDR acinetobacter after cardiac surgery at OSH and died on the 20<sup>th</sup> hospital day. A CHF patient on BIPAP was admitted to the same room and transferred to the ward on day 3. A 29 yo male with leukemia and pneumonia, requiring mechanical ventilation was then placed in the same room on neutropenic precautions.

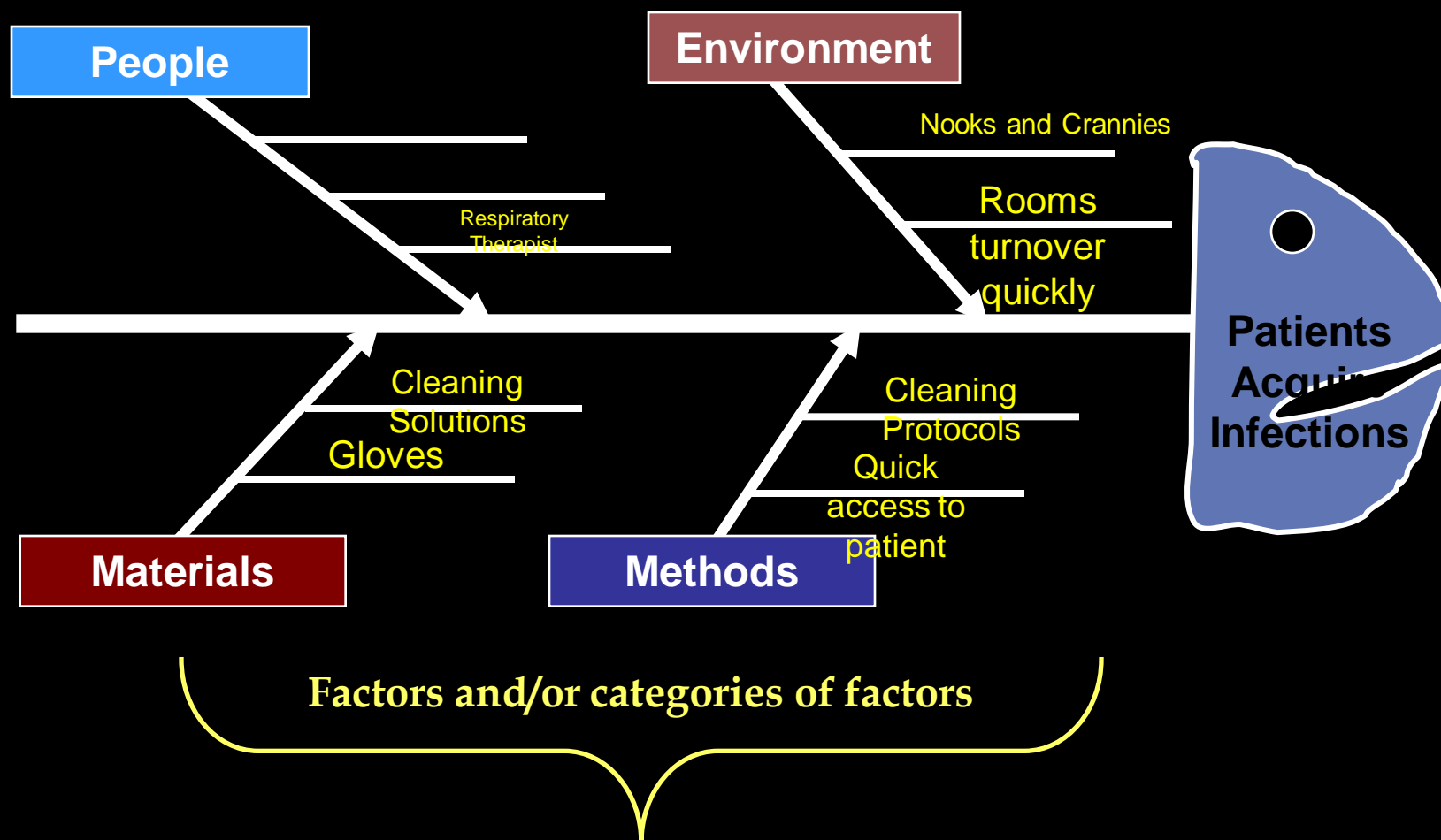


## Case 2 (continued)

- ▣ On day 4 of that admission, the patient became febrile and hypotensive. MDR acinetobacter was cultured from the sputum and the blood. The patient expired.

# Fishbone Diagram

- ▣ Created by Dr. Kaoru Ishikawa, a Japanese quality control statistician
- ▣ Cause and Effect
- ▣ To get a visual of a large problem
- ▣ To have a birds eye view of where procedures can break down
- ▣ To create a visual path to the problem
- ▣ To study a process and determine where the vulnerabilities are



# All roads led to cleaning...

- ▣ We were forced to reevaluate our processes for cleaning.
- ▣ Rooms were “double cleaned” after a MDRO infection
- ▣ Evaluated the role of skin cleaning

# Test your Hypothesis: IRB

- ▣ Request IRB approval if you are
  - Randomizing
  - Considering publication
  - Doing something not usually done to patients
- ▣ Fairly easy to obtain “IRB exemption” to receive approval and waive the requirement to consent the patient (low risk)

# Exploit your data!

Post it,

Present it,

Share it.

# Just DO Something!

- ▣ Identify the problem
  - AIM- Get a team and decide where you want to be
  - Measure- It's okay to sample, and it's okay to stop counting it
  - Change- Move forward
- ▣ It's okay to keep it simple
- ▣ It's okay to steal
- ▣ It's okay to have a bad idea